California Water Plan Update 2013

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NOVEMBER 26, 2013

INTRODUCTION

These comments represent my concerns and recommendations on key elements of the California Water Plan Update 2013 based on comments I provided at the October 29-30, 2013, Advisory Committee meeting sessions and a subsequent November 14 Conference Call with the California Department of Water Resources Water Plan Update staff.

As you may recall, my focus was related to the absence of above ground storage within the Water Plan Update as an important water management strategy. We all recognize the California Water Plan is a tool relied upon by many – including the Legislature – to develop policy and legislation aimed at developing future water supply policies and infrastructure.

If this plan were to continue to not include substantive discussion of above-ground storage, it would be much too easy for the reader to assume that above-ground storage is neither an important water management tool or even needed. Thus, a significant discussion of all aspects of above-ground storage must be included within the Water Plan Update.

MUNICIPAL AND AGRICULTURAL SUPPLY DEMANDS

California's water supplies sustain an incredible variety of natural resources and the state has worked hard in recent decades to enhance those environmental benefits. Still, the water needs of people, business, agriculture and other beneficial uses within the state's communities and counties have never been greater.

California today is a much different state than it was even a few decades ago. California has been transformed into the nation's most desirable state for residency and for production of a majority of the nation's food. The state is a leader in industry, technology and entertainment. These factors have been made possible as a result of above-ground water reservoirs and conveyance facilities such as Shasta Dam, Friant Dam and other features of the Central Valley Project, Oroville Dam and other features of the State Water Project, Hoover Dam for Southern California's supply of water from the Colorado River, Hetch Hetchy Reservoir for San Francisco and a large portion of the Bay Area, Pardee Reservoir for other portions of the Bay Area, and many other projects throughout the State.

The benefits of surface storage have been vital to generations of Californians. Reservoirs are the most effective means of capturing large quantities of water as runoff is occurring and storing it for beneficial use at later times. Without such surface storage, California not have been able to support more than a fraction of the population growth, and business and agricultural development, that has occurred over the years, let alone the growth certain to take place in the coming decades. To minimize, as the Water Plan Update appears to do, any meaningful discussion of surface water facilities and related infrastructure is a significant deficiency.

SURFACE WATER AND GROUNDWATER STORAGE

The Water Plan Update 2013 discusses conjunctive uses of water and highlights the importance of groundwater storage. Unfortunately, the Water Plan Update falls short in recognizing the essential role of ample surface storage capacity capturing runoff and managing the delivery of water for percolation to groundwater bank or in lieu of groundwater pumping s. Water Plan Update readers must be able to understand that when runoff occurs, flows are instantaneous and can be extremely high over a very short duration. It is not possible to rapidly convey and store such high runoff flows for percolation. Often during very wet conditions, is there no "home" for such water until soils dry out and local water source flows decline.

FLOOD CONTROL

Historically, many major reservoirs were constructed as a means of controlling high runoff flows in rivers and preventing flood damage. They have always done so and nothing today has changed. Although there are other actions being explored that might alleviate some flood management problems, the fact remains that storage of flood flows in reservoirs is still a highly effective and immediate means of preventing flooding. The Water Plan Update should continue to encourage development of reservoir storage where feasible as a means of controlling and managing floods. Protection of adjacent agricultural lands and urban areas is not the only need for such surface storage; in-stream channel improvements associated with environmental restoration (such as those contemplated by the San Joaquin River Restoration Program) are also subject to flood damage.

ECOSYSTEM DEPENDENCE

Many Californians tend to categorize dams and reservoirs as harmful to the environment. While there is no denying that ecosystem impacts have resulted from surface storage development, the fact remains that surface storage can also be beneficial to ecosystem restoration efforts. As an example, the San Joaquin River Restoration Program's success will be measured against its ability to provide cold water below Friant Dam to support restoration of a salmon fishery in one of the state's hottest regions. This challenge is unlikely to be overcome without increasing the existing ability to store cold water. In addition, additional water surface storage could provide additional water for in-stream ecosystem uses in dry years. Similarly, increasing the storage capacity of Shasta Lake would increase the cold water pool and improve the management of cold water for release to the Sacramento River.

OPERATIONAL INTEGRATION

The California Water Plan Update devotes a great deal of discussion to integrated water management opportunities. However, it falls short of recognizing a more global view – the potential for operational integration among reservoirs around the state. Existing reservoirs have nearly all been operated historically in ways that principally provide local and regional benefits. However, modeling has shown that these same surface storage facilities can be operated in a fashion that optimizes or increases water supply reliability during high runoff periods through integration with new reservoirs or expanded surface storage for in-stream ecosystem uses in dry years.

EMERGENCY SUPPLIES

Some 26 million Californians, and the communities in which they live, rely upon Delta water exports through the CVP and SWP for all or part of their water supplies. So do tens of thousands of California businesses and the vast numbers of jobs they support, and more than three million acres of farmland irrigated by water from the CVP and SWP. Should a catastrophic Delta interruption in CVP or SWP export supplies occur, users of Delta water could face disaster. New reservoir storage south of the Delta could provide emergency relief supplies in cases of such failures.

CONCLUSION

While the California Water Plan Update 2013 contains many interesting and frequently theoretical concepts, its draft largely overlooks the single most essential and effective tool for providing reliable water supplies – above-ground water storage. California could not have developed as it has without reservoirs and is unlikely to be able to accommodate future population and business growth without substantial new supplies. Above-ground storage is known among California's water system operators and suppliers to be the most effective means of capturing high flows and retaining that water to meet demands through dry seasons or years. Surface water storage is also vital to the processes of recharging and banking groundwater. It is the best means of controlling high runoff flows in rivers and preventing flood damage. Above-ground storage also includes potential for enhancing eco-system restoration in terms of water temperature and flow availability. It needs to be a much greater part of the California Water Plan Update 2013 discussion and final product.